

5 **METHODS AND COMPOSITIONS FOR TREATING CONDITIONS OF THE**
 CENTRAL AND PERIPHERAL NERVOUS SYSTEMS
 USING NON-SYNAPTIC MECHANISMS

10 **Abstract of the Disclosure**

 The present invention relates to methods and compositions for treating selected
conditions of the central and peripheral nervous systems employing non-synaptic
mechanisms. More specifically, one aspect of the present invention relates to methods
15 and materials for treating seizure and seizure disorders, epilepsy, status epilepticus,
migraine, spreading depression, intracranial hypertension; for treating the
pathophysiological effects of head trauma, stroke, ischemia and hypoxia; for treating or
protecting from the pathophysiological effects of neurotoxic agents such as ethanol; and
for treating neuropsychiatric disorders and central nervous system edema by
20 administering agents that modulate ionic concentrations and/or ionic gradients in the
brain, particularly ion-dependent or cation-chloride cotransporter antagonists. Electrolyte
cotransport antagonists and combinations of such compositions with other agents for
treating various conditions are disclosed. The present invention also relates to methods
and compositions for treating pain by administering ion-dependent cotransporter
25 antagonists. Methods and compositions for enhancing cortical function, for example, in
centers of cognition, learning and memory, by administering ion-dependent cotransporter
agonists are disclosed.

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